

First Named: Dan Matlock
Title: Rotational Light Emitting Display Apparatus
Serial No: 10/775,694
Docket No: MATLOCK-001
July 11, 2007
Page 2 of 9

AMENDMENT IN THE CLAIMS

Claims 1-20 (canceled).

Claim 21 (new):

A light emitting display apparatus for displaying an image as the display apparatus is rotated comprising:

- a support being rotatable about a center of rotation;
- a plurality of light emitting elements on said support and arranged in one or more generally parallel columns;
- a means for sensing the rotational position of said support about the center of rotation thereof and generating a signal;
- an image map of an image to be displayed;
- a microcontroller attached to each of said plurality of light emitting elements, said microcontroller receiving said signal and configured to illuminate one or more of said light emitting elements in accordance with said image map and said signal, thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans; and
- a power source connected to and providing electrical power to said microcontroller.

Claim 22 (new):

The light emitting display apparatus of claim 21, wherein said image map includes an array having a plurality of columns and wherein said microcontroller operates to select a column and illuminate one or more of said light emitting elements in accordance with the selected column.

First Named: Dan Matlock
Title: Rotational Light Emitting Display Apparatus
Serial No: 10/775,694
Docket No: MATLOCK-001
July 11, 2007
Page 3 of 9

Claim 23 (new):

The light emitting display apparatus of claim 22, wherein said microcontroller determines the rotational frequency of said support from said signal and further selects said column in accordance with said rotational frequency.

Claim 24 (new):

The light emitting display apparatus of claim 21, further comprising:
a plurality of image maps each having an array of a plurality of columns; and
wherein said microcontroller operates to select an image map from said plurality of image maps, select a column from said selected image map and illuminate one or more of said light emitting elements in accordance with the selected image map and the selected column.

Claim 25 (new):

The light emitting display apparatus of claim 24, wherein said microcontroller determines the rotational frequency of said support from said signal and further selects said image map and said column in accordance with said rotational frequency.

Claim 26 (new):

The light emitting display apparatus of claim 21, wherein said means for sensing the rotational movement of said support comprises a magnetic source stationary to said support and a magnetic-field sensor rotating with said support.

First Named: Dan Matlock
Title: Rotational Light Emitting Display Apparatus
Serial No: 10/775,694
Docket No: MATLOCK-001
July 11, 2007
Page 4 of 9

Claim 27 (new):

The light emitting display apparatus of claim 26, further comprising:
a coil, wherein said power sources is derived from electrical current generated in
said coil when passed by said magnetic source.

Claim 28 (new):

The light emitting display apparatus of claim 21, wherein said image to be displayed is
an animated image.

Claim 29 (new):

The light emitting display apparatus of claim 21, wherein said microcontroller further
operates to illuminate one or more of said light emitting elements to scale and steady
said image as said support is rotated.

Claim 30 (new):

A light emitting display apparatus for displaying a stationary or animated imaged on a
rotating object, such as, for example, a wheel of a vehicle, the light emitting display
apparatus comprising:

a support attachable to the rotating object so as to having the same center of
rotation as the rotating object;
a plurality of light emitting elements on said support and arranged in one or more
generally parallel columns;
an image map of an image to be displayed;
a means for sensing the rotational position of said support about the center of
rotation and generating a signal;

First Named: Dan Matlock
Title: Rotational Light Emitting Display Apparatus
Serial No: 10/775,694
Docket No: MATLOCK-001
July 11, 2007
Page 5 of 9

a microcontroller attached to each of said plurality of light emitting elements, said microcontroller receiving said signal and configured to illuminate one or more of said light emitting elements in accordance with said image map and said signal, thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans; and

a power source connected to and providing electrical power to said microcontroller.

Claim 31 (new):

The light emitting display apparatus of claim 30, wherein said image map includes an array having a plurality of columns and wherein said microcontroller operates to select a column and illuminate one or more of said light emitting elements in accordance with the selected column.

Claim 32 (new):

The light emitting display apparatus of claim 31, wherein said microcontroller determines the rotational frequency of said support from said signal and further selects said column in accordance with said rotational frequency.

Claim 33 (new):

The light emitting display apparatus of claim 30, further comprising:
a plurality of image maps each having an array of a plurality of columns; and
wherein said microcontroller operates to select an image map from said plurality of image maps, select a column from said selected image map and illuminate one or more of said light emitting elements in accordance with the selected image map and the selected column.

First Named: Dan Matlock
Title: Rotational Light Emitting Display Apparatus
Serial No: 10/775,694
Docket No: MATLOCK-001
July 11, 2007
Page 6 of 9

Claim 34 (new):

The light emitting display apparatus of claim 33, wherein said microcontroller determines the rotational frequency of said support from said signal and further selects said image map and said column in accordance with said rotational frequency.

Claim 35 (new):

The light emitting display apparatus of claim 30, wherein said means for sensing the rotational movement of said support comprises a magnetic source stationary to said support and a magnetic-field sensor rotating with said support.

Claim 36 (new):

The light emitting display apparatus of claim 35, further comprising:

a coil, wherein said power sources is derived from electrical current generated in said coil when passed by said magnetic source.

Claim 37 (new):

The light emitting display apparatus of claim 30, wherein said image to be displayed is an animated image.

Claim 38 (new):

The light emitting display apparatus of claim 37, wherein said image is selected from the group consisting of a vehicle instrument display, an accelerometer and a power meter.

First Named: Dan Matlock
Title: Rotational Light Emitting Display Apparatus
Serial No: 10/775,694
Docket No: MATLOCK-001
July 11, 2007
Page 7 of 9

Claim 39 (new):

The light emitting display apparatus of claim 30, wherein said microcontroller further operates to illuminate one or more of said light emitting elements to scale and steady said image as said support is rotated.

Claim 40 (new):

A light emitting display apparatus for displaying a stationary or animated imaged on a rotating object, such as, for example, a wheel of a vehicle, the light emitting display apparatus comprising:

a support attachable to the rotating object so as to having the same center of rotation as the rotating object;

a plurality of light emitting elements on said support and arranged in one or more generally parallel columns;

one or more image maps of an image to be displayed, each image map including an array of plurality of columns;

a means for sensing the rotational position of said support about the center of rotation and generating a signal;

a microcontroller attached to each of said plurality of light emitting elements, said microcontroller receiving said signal and operating to select an image map and a column from said selected image map in accordance with said signal and configured to illuminate one or more of said light emitting elements in accordance the selected image map, the selected column and said signal, thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans; and

a power source connected to and providing electrical power to said microcontroller.